

SECTION 02920 - LAWNS AND GRASSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Seeding.
- B. Related Sections:
 - 1. Division 2 Section "Site Clearing" for topsoil stripping and stockpiling.
 - 2. Division 2 Section "Earthwork" for excavation, filling and backfilling, and rough grading.

1.3 DEFINITIONS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Manufactured Soil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- C. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
- D. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill immediately beneath planting soil.
- E. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.

1.4 SUBMITTALS

- A. Product Data: For each type of product used for replacement.
- B. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
- C. Planting Schedule: Indicating anticipated planting dates for each type of planting.

1.5 QUALITY ASSURANCE

- A. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when planting is in progress.
- B. Topsoil Analysis: Furnish soil analysis by a qualified soil-testing laboratory.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Seed: Deliver seed in original sealed, labeled, and undamaged containers.

1.7 PROJECT CONDITIONS

- A. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with initial maintenance periods to provide required maintenance from date of planting completion Substantial Completion.
 - 1. Spring Planting: March 15 to May 31.
 - 2. Fall Planting: September 1 to November 15.
- B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit.

1.8 MAINTENANCE SERVICE

- A. Initial Lawn Maintenance Service: Begin maintenance immediately after each area is planted and continue until acceptable lawn is established, but for not less than the following periods:
 - 1. Seeded Lawns: 90 days from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SEED

- A. Seed Species: State-certified seed of grass species, as follows or approved equal: (Standard of quality based on United Seeds, Ralston, NE (402) 331-4800).
 - 1. Superturf 1, Turf Type Tall Fescue
 - a. Application Rate = 12 LBS per 1,000 S.F.
 - b. Consists of: 22.05% Blackwatch Turf, 22.05% Quest Turf, 22.05% Masterpiece Turf, 22.05% Interno Turf, 9.80% Topgun Perennial, 0.25% Crop, 1.70% Inert, and 0.05% Weeds.
 - c. Minimum Germination Rate 90%
Minimum percent purity 98%
Application rate (broadcast seeding = 450 lbs/acre PLS
Cover Crop: On all area seeded a cover crop shall be applied. The cover crop shall be annual rye grass applied at the rate of 40 lbs. of PLS per acre.

2.2 TOPSOIL

- A. Topsoil: ASTM D 5268, pH range of 5.5 to 7, a minimum of 4 percent organic material content; free of stones 1 inch (25 mm) or larger in any dimension and other extraneous materials harmful to plant growth.
 - 1. Topsoil Source: Amend existing in-place surface soil to produce topsoil. Verify suitability of surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth. Surface soil may be supplemented with imported or manufactured topsoil from off-site sources.

2.3 INORGANIC SOIL AMENDMENTS

- A. Lime: ASTM C 602, Class T or O, agricultural limestone containing a minimum of 80 percent calcium carbonate equivalent.
- B. Sulfur: Granular, biodegradable, containing a minimum of 90 percent sulfur, with a minimum of 99 percent passing through No. 6 (3.35-mm) sieve and a maximum of 10 percent passing through No. 40 (0.425-mm) sieve.
- C. Iron Sulfate: Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.
- D. Aluminum Sulfate: Commercial grade, unadulterated.

2.4 FERTILIZER

- A. Bonemeal: Commercial, raw or steamed, finely ground; a minimum of 1 percent nitrogen and 10 percent phosphoric acid.
- B. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.
- C. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
 - 1. Composition: 1 lb/1000 sq. ft. (0.45 kg/92.9 sq. m) of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.
- D. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
 - 1. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.

PART 3 - EXECUTION

3.1 LAWN PREPARATION

- A. Limit lawn subgrade preparation to areas to be planted.
- B. Newly Graded Subgrades: Loosen subgrade to a minimum depth of 4 inches (100 mm). Remove stones larger than 2 inches (50 mm) in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
 - 1. Apply superphosphate fertilizer directly to subgrade before loosening.
 - 2. Prepare/spread topsoil, apply soil amendments and fertilizer on surface, and thoroughly blend planting soil mix.
 - 3. Prepare planting soil mix to a depth of 4 inches (100 mm) but not less than required to meet finish grades after light rolling and natural settlement. Do not prepare if planting soil or subgrade is frozen, muddy, or excessively wet.
- C. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade to within plus or minus 2 inches (50 mm) of finish elevation. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit finish grading to areas that can be planted in the immediate future.
- D. Moisten prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
- E. Before planting, restore areas if eroded or otherwise disturbed after finish grading.

3.2 SEEDING

- A. Notify the Government Construction Representative a minimum of forty-eight (48) hours before commencing the work. Do not proceed with such work until authorized by the Government Construction Representative. Perform seeding operations from March 15 to May 31 or from September 1 to November 15 unless otherwise authorized in writing. Alternative dates authorized by the Government Construction Representative do not alter any warranty or establishment conditions or requirements. Perform dormant seeding after November 1. Do not perform seeding or fertilizing operations if the ground is wet, frozen, or otherwise untellable. Do not perform seeding or fertilizing operations when conditions do not allow for a uniform distribution of materials.

Prepare the seedbed by scarifying the upper four (4) inches of the soil in an acceptable manner a maximum of two (2) days before the sowing of seed. Perform disking, harrowing, and raking in the longitudinal direction on all slopes steeper than 1V:4H.

Apply mulch within twenty-four (24) hours after seeding unless otherwise directed by the Owner. Place the mulch covering at a thickness that shades the ground, reduces the rate of evaporation, and prevents or reduces erosion due to water or wind. Furnish the equipment and assistance necessary for accurate placement of the specified quantities. Do not place mulch if, in the judgment of the Owner, the wind velocity is too great to allow uniform distribution of the mulch materials.

- B. Maintain seeded areas for a minimum of six (6) months after application of the seeding materials. The Owner reserves the right to accept seeded area before completion of the six (6) month period. Reseed and maintain any areas not moist or fully growing at or before the completion of the six (6) month period.
- C. Apply fertilizer using an approved mechanical spreader or approved hydraulic methods uniformly over all areas receiving seed. Do not blend any fertilizer without the Owner present. Incorporate fertilizer into the soil before seeding.
- D. Apply seed after fertilizing using approved mechanical power-drawn drills equipped with press wheels or drag chains. Do not use hydraulic seeders without written authorization from the Owner. Using a stand lawn roller, harrow or hand rake and compact any areas in accessible to the drill and seeded using a broadcast-type seeder. Maintain a planting depth of one-half (1/2) to three-fourths (3/4) inches when using a mechanical power-drawn drill.
- E. Straw Mulch. Place the mulch covering loosely enough to allow sunlight to penetrate and air to slowly circulate. Place the mulch covering at a thickness that shades the ground, reduces the rate of evaporation, and prevents or reduces erosion due to water or wind

Apply mulch using a mulch-blowing machine or other methods acceptable to the Owner. Apply straw at the rate of three (3) tons per acre.

Anchor the mulch using a mulch crimper or other approved equipment with dull disc blades without camber immediately after spreading. Use a mulch crimper equipped with a ballast compartment that allows an increase or decrease in the weight. Crimp mulch the same day that it is applied.

3.3 SATISFACTORY LAWNS

- A. Lawn installations shall meet the following criteria as determined by Architect:
 - 1. Satisfactory Seeded Lawn: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 sq. ft. (0.92 sq. m) and bare spots not exceeding 5 by 5 inches (125 by 125 mm).

3.4 CLEANUP AND PROTECTION

- A. Promptly remove soil and debris, created by lawn work, from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after lawn is established.

END OF SECTION 02920